

Virtual Mirroring of the Collaborative Chronic Care Network: A Longitudinal Social Network Analysis

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Most previous SNA research has depended on time-invariant theories and correlational designs with self-reported data on the nature and intensity of relationships. Through analysis of primary email communication data over two years, we characterize emergent dynamics of the evolving Collaborative Chronic Care Network (C3N): a multidisciplinary incubator of patients, clinicians, and researchers designing a new system for chronic illness care. We study twenty innovation teams working on diverse aspects of the C3N project and introduce the *virtual mirroring* of teams' interaction patterns with SNA tools and team feedback sessions. We thereby participate in the creation of a self-organizing feedback loop to visualize knowledge and communication flows, reveal ongoing opportunities for improvement, and re-engineer team structures and processes. Virtual mirroring may encourage individuals to change their behaviors in pursuit of targeted team outcomes as well as identify opportunities for team leaders to support ongoing cycles of innovation and execution. In addition to archived email communication, we also draw on survey data from C3N team members and project leadership ratings.

The main research questions leading this study include: What are the salient mechanisms by which virtual mirroring may enhance innovation team performance? To what extent can fluid structures, generative communication, and distributed leadership enhance innovation team performance? How can the visualization of interactions, explicit consideration of communication patterns, and increased transparency of network structures help us to design and manage emergent systems like the C3N?